AMENDMENT

IN THE CLAIMS:

Please amend claims 25, 26, and 42-44 and add new claims 54-58 as shown in the list of claims below:

1.-21. (Canceled).

22. (Previously Added) A nucleic acid molecule comprising a nucleotide sequence encoding a biofilament polypeptide and a regulatory sequence that directs expression of a polypeptide in milk-producing cells of a ruminant, wherein said regulatory sequence is operably linked to said nucleotide sequence, and wherein said biofilament polypeptide comprises a leader sequence that enables secretion of said biofilament polypeptide by said milk-producing cells into milk of the ruminant.

23. (Previously Added) The nucleic acid molecule of claim 22, wherein the regulatory sequence is a whey acidic protein promoter, an αS1-casein promoter, an αS2-casein promoter, a β-casein promoter, a κ-casein promoter, a β-lactoglobin promoter, or an α-lactalbumin promoter.

24. (Previously Added) The nucleic acid molecule of claim 22, wherein the ruminant is a goat.

25. (Currently Amended) The nucleic acid molecule of claim 22, wherein said biofilament polypeptide is a spider silk polypeptide.

26. (Currently Amended) The nucleic acid molecule of claim 25, wherein said spider silk polypeptide is a dragline silk polypeptide.

27. (Previously Added) The nucleic acid molecule of claim 22, wherein said biofilament polypeptide comprises a poly-alanine segment that forms a β-crystal.

28. (Previously Added) The nucleic acid molecule of claim 22, wherein said biofilament polypeptide comprises an amorphous domain that forms a β-pleated sheet with inter-β sheet spacings that are between about 3 angstroms and about 8 angstroms in size.

29. (Previously Added) The nucleic acid molecule of claim 22, wherein said biofilament polypeptide has a molecular weight between about 274,000 daltons to about 750,000 daltons.

30. (Previously Added) The nucleic acid molecule of claim 22, wherein said biofilament polypeptide comprises an amorphous domain and a crystal forming domain.

31. (Previously Added) The nucleic acid molecule of claim 30, wherein said amorphous domain and said crystal forming domain have a sequence that is at least 50% identical to SEQ ID NO: 2.

32. (Previously Added) The nucleic acid molecule of claim 31, wherein said amorphous domain and crystal forming domain have a sequence that is at least 90% identical to SEQ ID NO: 2.

33. (Previously Added) The nucleic acid molecule of claim 22, wherein said biofilament polypeptide comprises an amino acid sequence of SEQ ID NO: 2.

34. (Previously Added) The nucleic acid molecule of claim 22, wherein said biofilament polypeptide comprises a consensus sequence that is at least 50% identical to SEQ ID NO: 3.

35. (Previously Added) The nucleic acid molecule of claim 34, wherein said biofilament polypeptide has a consensus sequence that is at least 90% identical to SEQ ID NO: 3.

36. (Previously Added) The nucleic acid molecule of claim 22, wherein said biofilament polypeptide comprises an amino acid sequence of SEQ ID NO: 3.

37. (Previously Added) A mammary epithelial cell comprising the nucleic acid molecule of claim 22.

38. (Previously Added) The mammary epithelial cell of claim 37, wherein the nucleic acid molecule is located in the genome of the cell.

39. (Previously Added) A female ruminant comprising mammary tissue cells that comprise the nucleic acid molecule of claim 22, wherein the ruminant secretes a biofilament polypeptide into milk.

40. (Previously Added) A method for producing a biofilament polypeptide, comprising: providing a female ruminant of claim 39 and isolating the biofilament polypeptide from milk produced by the female ruminant.

41. (Previously Added) A method for producing a biofilament polypeptide, comprising:
(a) culturing a cell of claim 37 under conditions in which said biofilament polypeptide is expressed and secreted into a culture medium of said culturing cell; and
(b) isolating said biofilament polypeptide from said culture medium.

42. (Currently Amended) The method of claim 40 or 41, wherein said biofilament polypeptide is a spider silk polypeptide.

43. (Currently Amended) The method of claim 42, wherein said spider silk polypeptide is a dragline silk polypeptide.

44. (Currently Amended) The method of claim 40 or 41, wherein said biofilament polypeptide comprises a poly-alanine segment that forms [formes] a β-crystal.

45. (Previously Added) The method of claim 40 or 41, wherein said biofilament polypeptide comprises an amorphous domain that forms a β-pleated sheet with inter-β sheet spacings that are between about 3 angstroms and about 8 angstroms in size.

46. (Previously Added) The method of claim 40 or 41, wherein said biofilament polypeptide has a molecular weight between about 274,000 daltons to about 750,000 daltons.

47. (Previously Added) The method of claim 40 or 41, wherein said biofilament polypeptide comprises an amorphous domain and a crystal forming domain.

48. (Previously Added) The method of claim 47, wherein said amorphous domain and said crystal forming domain have a sequence that is at least 50% identical to SEQ ID NO: 2.

49. (Previously Added) The method of claim 48, wherein said amorphous domain and said crystal forming domain have a sequence that is at least 90% identical to SEQ ID NO: 2.

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50. (Previously Added) The method of claim 40 or 41, wherein said biofilament polypeptide comprises an amino acid sequence of SEQ ID NO: 2.

51. (Previously Added) The method of claim 40 or 41, wherein said biofilament polypeptide comprises a consensus sequence that is at least 50% identical to SEQ ID NO: 3.

52. (Previously Added) The method of claim 51, wherein said biofilament polypeptide has a consensus sequence that is at least 90% identical to SEQ ID NO: 3.

53. (Previously Added) The method of claim 40 or 41, wherein said biofilament polypeptide comprises an amino acid sequence of SEQ ID NO: 3.

54. (New) The nucleic acid molecule of claim 22, wherein said encoded biofilament polypeptide comprises a *Nephila* spideroin 1 polypeptide, wherein said regulatory sequence is a goat β-casein promoter, and wherein said leader sequence comprises goat β-casein leader sequence.

55. (New) The nucleic acid molecule of claim 22, wherein said encoded biofilament polypeptide comprises a *Nephila* spideroin 1 polypeptide, wherein said regulatory sequence is a whey acidic protein promoter, and wherein said leader sequence comprises whey acidic protein leader sequence.

56. (New) The nucleic acid molecule of claim 30, wherein said biofilament polypeptide further comprises a *Nephila* spideroin 1 polypeptide.

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57. (New) The nucleic acid molecule of claim 30, wherein said biofilament polypeptide further comprises a *Nephila* spideroin 2 polypeptide.

58. (New) The nucleic acid molecule of claim 30, wherein said biofilament polypeptide further comprises an *Araneus diadematus* fibroin 3 ("ADF-3") polypeptide.